

## CLAIMS

What is claimed is:

1. A system for providing simulation of an integrated circuit during development of the integrated circuit, the integrated circuit having an island **including** an interface, the system comprising:

a snooper coupled with the interface for obtaining an output provided by the island during simulation;

a checker, coupled with the interface, for checking the output to determine whether the output is a desired output;

a generator coupled with the island for providing an input to the island during simulation; and

at least one test case coupled with the generator for directing the generator.

2. The system of claim 1 wherein the checker is coupled with the snooper and wherein the checker receives the output from the snooper.

3. The system of claim 1 wherein the snooper may be reused when the island is integrated with a second island.

4. The system of claim 1 wherein the checker may be reused when the island is integrated with a second island.

1           5.     The system of claim 1 wherein the generator may be reused when the island  
2 is integrated with a second island.

1           6.     The system of claim 1 wherein the generator receives the output and provides  
2 the input based on the output.

1           7.     The system of claim 1 wherein the generator and the snoopers are coupled  
2 with the interface, wherein the checker is coupled with the interface through the snoopers and  
wherein only the snoopers and the checker are reused when a second island is integrated with  
the island at the interface.

8.     The system of claim 1 wherein the at least one test case further provides data  
and instructions to the generator.

9.     The system of claim 1 wherein the interface is an internal interface.

1       10.    A method for providing simulation of an integrated circuit during  
2 development of the integrated circuit, the integrated circuit having an island **including** an  
3 interface, the method comprising the steps of:

- 4           (a)    snooping the interface to obtain an output provided by the island during  
5 simulation;  
6           (b)    checking the output to determine whether the output is a desired output;  
7           (c)    providing an input to the island during simulation; and

8 2/ AH (d) directing the providing of the input using at least one test case.

1 11. The method of claim 10 wherein step (a) further includes the step of:

2 (a1) snooping the interface to obtain the output provided by the island during  
3 simulation using a snooper, the snooper capable of being reused when the island is  
4 integrated with a second island.

1 12. The method of claim 10 wherein step (b) further includes the step of:

2 (b1) checking the output using a checker to determine whether the output is the  
3 desired output, the checker capable of being reused when the island is integrated with a  
4 second island.

1 13. The method of claim 10 wherein step (c) further includes the step of:

2 (c1) providing the input to the island during simulation using a generator, the  
3 generator capable of being reused when the island is integrated with a second island.

1 14. The method of claim 10 wherein step (c) further includes the step of:

2 (c1) providing an input to the island during simulation using a generator, the  
3 generator receiving the output and providing the input based on the output.

1 15. The method of claim 14 wherein the directing step (d) further includes the  
2 step of:

3 (d1) providing data and instructions from the at least one test case to the generator.

16. The method of claim 10 wherein the interface is an internal interface.

17. A computer-readable medium having a program for providing simulation of an integrated circuit during development of the integrated circuit, the integrated circuit having an island **including** an interface, the program comprising instruction for:

- (a) snooping the interface to obtain an output provided by the island during simulation;
- (b) checking the output to determine whether the output is a desired output;
- (c) providing an input to the island during simulation;
- (d) directing the providing of the input using at least one test case.

18. The computer-readable medium of claim 17 wherein the instruction for snooping (a) further includes the instructions for:

- (a1) snooping the interface to obtain the output provided by the island during simulation using a snooper, the snooper capable of being reused when the island is integrated with a second island.

19. The computer-readable medium of claim 17 wherein the instruction for checking (b) further includes instructions for:

- (b1) checking the output using a checker to determine whether the output is the desired output, the checker capable of being reused when the island is integrated with a second island.

1           20.    The computer-readable medium of claim 17 wherein the input providing step  
2 (c) further includes instructions for:

3           (c1)   providing the input to the island during simulation using a generator, the  
4 generator capable of being reused when the island is integrated with a second island.

1           21.    The computer-readable medium of claim 17 wherein the input providing step  
2 (c) further includes instructions for:

3           (c1)   providing an input to the island during simulation using a generator, the  
generator receiving the output and providing the input based on the output.

4           22.    The computer-readable medium of claim 17 wherein the directing  
instructions (d) further includes the instructions for:

5           (d1)   providing data and instructions from the at least one test case to the generator.

6           23.    The computer-readable medium of claim 17 wherein the interface is an  
internal interface.